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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/627,581

07/24/2003

Choichiro Tsuchihashi

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3007

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03/01/2005

CHRISTIE, PARKER & HALE, LLP
PO BOX 7068
PASADENA, CA 91109-7068

EXAMINER

NGUYEN, VINCENT Q

ART UNIT

PAPER NUMBER

2858

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p>10/627,581</p>	<p>Applicant(s)</p> <p>TSUCHIHASHI ET AL.</p>	
	<p>Examiner</p> <p>Vincent Q Nguyen</p>	<p>Art Unit</p> <p>2858</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Response 01/03/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, are rejected under 35 U.S.C. 103(a) as being unpatentable over Yaacov et al. (5,237,330) in view of Suzuki et al. (5,576,713).

Regarding claim 1, Yaacov et al. discloses a device (Figure 2A) in which an oscillating output, from a gate of an FET (11) functioning as an oscillator, is coupled via a resonant line (13) to antenna (12) (Column 2, lines 45-46), and a beat signal component output from said gate due to a phase difference between said transmitted and said reflected wave is taken as a moving object wave detection signal (Column 2, lines 22-32).

Yaacov et al. does not disclose a transmit-receive antenna.

Suzuki et al. discloses a device similar to that of Yaacov et al. (Figure 20) and further discloses an oscillating output, from a gate of an FET (20) functioning as an oscillator, is coupled via a resonant line (From element 22) to a transmit-receive antenna (G) (Column 8, lines 16-19), a wave transmitted from said antenna and returned as a reflected wave, is received at said gate (G), for the purpose of improving

the differential gain characteristic of a modulator and radar equipment (Column 1, lines 10-14).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the transmit-receive antenna as taught by Suzuki et al. into the system of Yaacov et al. because the transmit-receive antenna would improve the gain characteristic of a modulator and radar equipment.

Regarding claim 3, Yaacov et al. discloses said FET is a GaAs FET (Column 2, lines 37).

3. Claims 2, 4, are rejected under 35 U.S.C. 103(a) as being unpatentable over Yaacov et al. (5,237,330) in view of Suzuki et al. (5,576,713), as applied to claim 1 above, and further in view of Matsui et al. (5,450,040).

Regarding claim 2, Yaacov et al. and Suzuki et al. discloses every subject matter recited in the claim except for explicitly discloses slot-coupled to said resonant line by a triplate structure.

Matsui et al. discloses oscillator for microwave and further discloses several coupling means to couple to the resonant line includes the slot-coupled (33) to the resonant line by a triplate structure (4) (Figure 20) for the purpose of enhancing the connection of the resonator lines (Column 15, lines 8-32).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the slot-coupled to the resonant line as taught by Matsui et al. into the system of Yaacov because slot-coupled to the resonant line by a triplate structure is one of the well known technique to couple to the resonant line.

Regarding claim 4, Yaacov et al. discloses said FET is a GaAs FET (Column 2, lines 37).

Response to Arguments

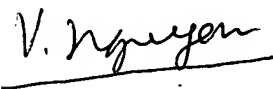
4. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent Q Nguyen whose telephone number is (571) 272-2234. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Vincent Q. Nguyen
Primary Examiner
Art Unit 2858

February 5, 2005